METHODS AND APPARATUS FOR RESISTANCE VARIABLE MATERIAL CELLS

Abstract of the Disclosure

The present invention is related to methods and apparatus to produce a memory cell or resistance variable material with improved data retention characteristics and higher switching speeds. In a memory cell according to an embodiment of the present invention, silver selenide and a chalcogenide glass, such as germanium selenide ($Ge_xSe_{(1-x)}$) are combined in an active layer, which supports the formation of conductive pathways in the presence of an electric potential applied between electrodes. Advantageously, embodiments of the present invention can be fabricated with relatively wide ranges for the thicknesses of the silver selenide and glass layers.

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